

### ABSTRACT

A gain voltage controller for use with a sampled grating distributed Bragg reflector (SGDBR) laser is presented. The controller provides separate inputs to the laser including a front mirror current controlling a front mirror and a back mirror current controlling a back mirror to control the laser and a voltage monitor, coupled to a gain section of the laser for monitoring a gain voltage of the gain section and providing input of the gain voltage to the controller. The controller controls the front mirror current and the back mirror current to minimize the voltage monitored from the gain section of the laser.

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